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13 (currently amended). A communication network arrangement for handling packets within optical or combined optical/electrical packet switched networks, the communication network arrangement comprising:

means for dividing packets within the network by first and second QoS classes;

means for transmitting packets of the first QoS class in a first state of polarization and transmitting packets of the second QoS in a second state of polarization;

an ingress node; and

at least one core node, said core node having at least one polarisation beam splitter (PBS1) and at least one optical demultiplexer,

wherein the ingress node and the at least one core node comprises an optical packet switched module attached to a S-WRON node.

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22 (currently amended). A method for handling packets within optical or combined optical/electrical packet switched networks comprising at least an ingress node for multiplexing of optical packets by polarization and an egress node for demultiplexing of received optical packets by polarization, comprising:

dividing packets of the ingress node as first and second QoS classes of packets, and

transmitting packets of the first QoS class in a first state of polarization and transmitting packets of the second QoS in a second state of polarization, by either interleaving packets of the second QoS class of packets with packets of the first QoS class or by simultaneously transmitting packets of a first QoS class in a first state of polarization and transmitting packets of a second QoS class in a second state of polarization, the states of polarization being substantially orthogonal,

wherein the network further has at least one core node that executes at least one of the following steps:

a) demultiplexing received traffic by polarisation,

b) polarizing the received traffic, and

c) SOP-aligning received traffic.

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25 (currently amended). A method for handling packets within optical or combined optical/electrical packet switched networks comprising at least an ingress node for multiplexing of optical packets by polarization, an egress node for demultiplexing of received optical packets by polarization, and at least one core node, comprising:

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dividing packets of the ingress node as first and second QoS classes of packets, and

transmitting packets of the first QoS class in a first state of polarization and transmitting packets of the second QoS in a second state of polarization, by either interleaving packets of the second QoS class of packets with packets of the first QoS class or by simultaneously transmitting packets of a first QoS class in a first state of polarization and transmitting packets of a second QoS class in a second state of polarization, the states of polarization being substantially orthogonal; and

interchanging said first and said second states of polarization at the beginning of each packet,

wherein the at least one core node executes time divisional multiplexing of received packets.

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26 (currently amended). The method of claim 22, wherein at least one core node in the optical packet switched network is SOP-realigning received packets.

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27 (currently amended). The method of claim 22, wherein when a first packet of a first QoS class arrives at a switch the following steps are carried out:

a controlling device registering that the first packet is present at the input;

then delaying the first packet in a FDL in a first predetermined period of time, [[and]]

reserving an output where the first packet is directed to be transmitted, and

communicating the first packet exiting a FDL to [[an]] a reserved vacant output.

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28 (currently amended). The method of claim 27, further comprising defining the first predefined period of time to be longer than a second period of time, and defining the second period of time using a packet with a lower QoS level than the first packet where the second packet is of a maximum allowed size.

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29 (currently amended). A method for handling packets within optical or combined optical/electrical packet switched networks comprising at least an ingress node for multiplexing of optical packets by polarization and an egress node for demultiplexing of received optical packets by polarization, comprising:

dividing packets of the ingress node as first and second QoS classes of packets, and

Deleted: according to claim 21,